

**Before the
Federal Communications Commission
Washington, D.C. 20554**

In the Matter of)
)
WASHINGTON, STATE OF; DEPT OF)
TRANSPORTATION)
)
Licensee of Private Land Mobile Radio Stations)
WPKU987, WPMS956, WPMS961, WPRF275,)
and WPRH880)

ORDER OF MODIFICATION

Adopted: August 24, 2010

Released: August 24, 2010

By the Deputy Chief, Policy Division, Public Safety and Homeland Security Bureau:

I. INTRODUCTION

1. By this *Order of Modification*, we modify certain licenses of the State of Washington, Department of Transportation (Washington DOT) as follows:

- We remove the frequencies listed in Attachment I from all base station and control station locations for Stations WPKU987, WPMS961, WPRF275, and WPRH880;
- We remove the frequencies listed in Attachment I for Station WPMS956 from the control station location and
- reduce the Effective Radiated Power (ERP) of the base station location for Station WPMS956 on the frequencies listed in Attachment I from 100 watts to 46.8 watts. Furthermore, we place a condition on the base station location for Station WPMS956 requiring Washington DOT to use an antenna which limits the signal strength at the border with Canada to the permitted level.

We take these actions in furtherance of ensuring compliance with international obligations.

II. BACKGROUND

2. Washington DOT is licensed to operate Private Land Mobile Radio Stations WPKU987, WPMS956, WPMS961, WPRF275 and WPRH880 at multiple fixed locations throughout the State of Washington. Because these stations operate in the 800 MHz band and are located within 140 kilometers of the border with Canada, they are subject to the provisions of a bilateral annex with Canada (Arrangement F) and an associated Interim Arrangement which specify the conditions under which 800 MHz PLMR stations may operate along the border.¹

¹ See Arrangement Between the Dept. of Communications of Canada and the FCC of the United States Concerning the Use Along the US-Canada Border of the Band 806-890 MHz (Jan. 1994) (Arrangement F); *see also* Arrangement Between the Dept. of Communications of Canada and the FCC of the United States Concerning the Use Along the US-Canada Border of the Bands 821-824 MHz and 866-869 MHz (Sep. 1990) (Interim Arrangement) both as modified by attachment to letter from Robert W. McCaugern, Deputy Director General, Spectrum Engineering to Mr. Bruce Franca, Deputy Chief Engineer, Office of Engineering and Technology, Federal Communications Commission (Dec. 9, 1994) (Letter Amendment).

3. Arrangement F and the associated Interim Arrangement divide the 800 MHz band into band segments and assign primary access to these band segments to either licensees in the U.S. or Canada.² U.S. licensees may operate on band segments designated as primary to licensees in Canada, but only if they satisfy certain signal strength limits at the border.³ These signal strength limits are specified in terms of power flux density (PFD) and vary depending on the height of the transmitting antenna.⁴

4. On May 21, 2010, the Public Safety and Homeland Security Bureau, acting under delegated authority, issued Washington DOT an *Order Proposing Modification (OPM)*, which proposed modifying the licenses for PLMR stations WPKU987, WPMS956, WPMS961, WPRF275 and WPRH880 by removing all frequencies which are primary to licensees in Canada from the base station and control station locations authorized under these call signs.⁵ The removal of the frequencies specified in the OPM was intended to bring these base station and control station locations into compliance with the signal strength limits specified in Arrangement F and the associated Interim Arrangement for operation on frequencies primary to licensees in Canada.⁶ Washington DOT was afforded 30 days to respond to the OPM.⁷

5. On June 17, 2010, Washington DOT filed a response to the OPM and agreed, with regard to PLMR Stations WPKU987, WPRF275, WPRH880 and WPMS961, to cease operating on the frequencies listed in the OPM for these call signs.⁸ With regard to PLMR Station WPMS956, however, Washington DOT states that its operation at the base station location referenced in the OPM complies with the pertinent signal strength limit at the border with Canada when terrain, antenna configuration data and the actual operating ERP are taken into account.⁹ Consequently, Washington DOT seeks to continue operating this base station location on the frequencies listed in the OPM.¹⁰

III. DISCUSSION

6. Based on Washington DOT's submission, we re-analyzed the signal strength at the border from the base station location licensed under call sign WPMS956 using a terrain propagation model and taking into account the actual ERP and the parameters of the antenna deployed at this site. Using this additional information, our re-analysis reveals that this base station location does comply with the permitted PFD at the border when these factors are taken into account.¹¹ Consequently, rather than

² Arrangement F at ¶¶ 3-4. Interim Arrangement at ¶¶ 2-3.

³ Letter Amendment at Annex A.

⁴ *Id.* at Annex B, Tables C1 and C2.

⁵ State of Washington, Department of Transportation, *Order Proposing Modification*, 25 FCC Rcd 5394 (PSHSB 2010) (*OPM*).

⁶ *Id.*, 25 FCC Rcd 5395 at ¶ 5.

⁷ *Id.*, 25 FCC Rcd 5395 at ¶ 6.

⁸ State of Washington, Department of Transportation, Response at 1 (Washington DOT Response).

⁹ Washington DOT indicates that, although the licensed ERP is 100 watts, the ERP of the base station after antenna gain, duplexer loss, combiner loss and feedline loss are taken into account is actually 46.8 watts. *Id.* at 3.

¹⁰ *Id.*

¹¹ Our terrain sensitive propagation analysis was based on a Longley Rice model using ten percent time and location variability. The actual ERP of 46.8 watts was used in the analysis and the impact of the six degrees of downward beam tilt was taken into account.

removing the frequencies primary to licensees in Canada from this base station location, as proposed in the *OPM*, we will modify the license to reduce the power of the base station location to the actual operating ERP of 46.8 watts. This reduction in ERP will apply only to the frequencies primary to licensees in Canada. Furthermore, we will place a condition on license WPMS956 requiring Washington DOT to use an antenna at this base station location which limits the power in the direction of the border to Canada to the permitted level on these frequencies.

7. Washington DOT makes no statement in its filing about its operation of control stations under call sign WPMS956 on frequencies primary to licensees in Canada. Consequently, we will remove these frequencies from license WPMS956 as proposed in the *OPM*.¹² Furthermore, we will remove all frequencies primary to licensees in Canada from licenses WPKU987, WPRF275, WPRH880 and WPMS961 as proposed in the *OPM*.¹³

8. ACCORDINGLY, IT IS ORDERED, pursuant to Sections 4(i) and 316 of the Communications Act of 1934, as amended, 47 U.S.C. §§ 154(i), 316, and Section 1.87 of the Commission's Rules, 47 C.F.R. § 1.87 that the licenses for Private Land Mobile Radio Service Stations WPKU987, WPMS956, WPMS961, WPRF275 and WPRH880, held by Washington, State of, Department of Transportation, BE MODIFIED by removing the frequencies listed in Attachment I, Table A1 from the base station and control station locations.

9. IT IS FURTHER ORDERED, pursuant to Sections 4(i) and 316 of the Communications Act of 1934, as amended, 47 U.S.C. §§ 154(i), 316, and Section 1.87 of the Commission's Rules, 47 C.F.R. § 1.87 that the license for Private Land Mobile Radio Service Stations WPMS956 held by Washington, State of, Department of Transportation, BE MODIFIED to reduce the Effective Radiated Power at base station location number 1 to 46.8 watts on the frequencies listed in Attachment I, Table A2.

10. IT IS FURTHER ORDERED, pursuant to Sections 4(i) and 316 of the Communications Act of 1934, as amended, 47 U.S.C. §§ 154(i), 316, and Section 1.87 of the Commission's Rules, 47 C.F.R. § 1.87 that the license for Private Land Mobile Radio Service Stations WPMS956 held by Washington, State of, Department of Transportation, BE MODIFIED to add a condition to base station location number 1 stating that an antenna must be deployed which limits the signal strength at the border with Canada to $-101 \text{ dB(w/m}^2\text{)}/25 \text{ kHz}$ or less on frequencies primary to licensees in Canada.

11. IT IS FURTHER ORDERED, that the Chief of the Licensing Branch, Policy Division, Public Safety and Homeland Security Bureau, SHALL CAUSE the records of the Commission's Universal Licensing System for Private Land Mobile Radio Service Stations WPKU987, WPMS956, WPMS961, WPRF275, and WPRH880 to be modified consistent with this *Order of Modification*.

12. IT IS FURTHER ORDERED that this *Order of Modification* shall be sent by certified mail, return receipt requested, to Washington, State of, Department of Transportation, ATTN ITS Communications & Wireless Tech., 7345 Linderson Way, SW, Olympia, WA 98504.

¹² *OPM*, 25 FCC Rcd 5395 at ¶ 5.

¹³ *Id.*

13. This action is taken under delegated authority pursuant to Sections 0.191 and 0.392 of the Commission's Rules, 47 C.F.R. §§ 0.191, 0.392.

FEDERAL COMMUNICATIONS COMMISSION

Michael J. Wilhelm
Deputy Chief, Policy Division
Public Safety and Homeland Security Bureau

Attachment I

The frequencies listed in Table A1 shall be deleted from the call signs as indicated below.

Table A1

Call Sign	Location No.	Station Class	Frequency to be Deleted (MHz)
WPKU987	1	FB2	866.0625
WPKU987	1	FB2	866.5875
WPKU987	1	FB2	867.0875
WPKU987	2	FX1	821.0625
WPKU987	2	FX1	821.5875
WPKU987	2	FX1	822.0875
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WPMS956	2	FX1	821.6125
WPMS956	2	FX1	822.0375
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WPMS961	1	FB2	866.6125
WPMS961	1	FB2	867.0375
WPMS961	2	FX1	821.6125
WPMS961	2	FX1	822.9375 ¹⁴
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WPRF275	1	FB2	866.0625
WPRF275	1	FB2	866.5875
WPRF275	1	FB2	867.0875
WPRF275	3	FX1	821.0625
WPRF275	3	FX1	821.5875
WPRF275	3	FX1	822.0875

¹⁴ This frequency was not included in the OPM but Washington DOT states this frequency is listed in error on license WPMS961 and that it should be listed as frequency 822.0375 MHz which is a frequency primary to licensees in Canada. Washington DOT states that it will cease operation on this frequency. See Washington DOT response at 2.

Call Sign	Location No.	Station Class	Frequency to be Deleted (MHz)
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WPRH880	1	FB2	867.2500
WPRH880	3	FX1	822.2500

The maximum permitted ERP for PLMR station WPMS956 at the location listed below is limited to the value shown in the rightmost column of Table A2

Table A2

Call Sign	Location No.	Lat. (N)	Long. (W)	Licensed Frequency (MHz)	Maximum Permitted ERP (watts)
WPMS956	1	48° 17' 02.6"	117° 34' 18.8"	866.6125	46.8
WPMS956	1	48° 17' 02.6"	117° 34' 18.8"	867.0375	46.8

The following condition will also be added to the location listed in Table A2:

An antenna must be deployed which limits the signal strength at the border with Canada to -107 dB(w/m²)/25 kHz or less on frequencies primary to licensees in Canada.